

Introducing WAISserver™ 2.0

Power Tools for Professional Online Publishers

WAISserver™ is the leading publishing system in the Internet industry. Using WAISserver, organizations such as Dow Jones, the Library of Congress, Novell, CMP Publications, and Encyclopaedia Britannica have given Internet users access to books, magazines, news information, product data sheets, technical overviews, company information, and more. WAISserver allows content providers to index and publish large databases to the Internet, where they can be searched from around the world. Content providers can publish databases in remote locations and different formats, documents in different formats, and manage updates to databases without re-indexing.

Internet users can access WAIS databases with popular clients such as NCSA Mosaic, Netscape, and Gopher, and most importantly, search for the information they need by typing in simple natural language queries.

HISTORY OF WAIS

WAIS (Wide Area Information Servers) is the standard for Internet publishing. WAIS Inc. founder Brewster Kahle developed WAIS as a freeware product. Two years ago he formed WAIS Inc. to redesign WAIS for large scale publish-

ing. The commercial version, called WAISserver, goes far beyond the capabilities of the freeware version, which helped establish WAIS as a standard for Internet-based online publishing. There are now over 800 WAIS databases on the Internet today.

WAIS AND THE WORLD WIDE WEB

WAIS is the key that unlocks the content behind the World Wide Web. WAIS provides searching capabilities to point-and-click clients like Mosaic, in which users search for information by navigating hypertext links between documents. For instance, suppose a company wanted to buy a copy machine with specific features which was small enough to fit in a utility closet.

An employee of the company could go to a vendor's home page on the Web, and if it is "powered by WAISserver", type in "Tell me about copiers with two sided copying, and automatic collating, no bigger than 48 inches by 36 inches," get all the available models, and ask for pricing and distributors. With a Web server that wasn't powered by a WAISserver, the end user would have to navigate links and hope to find the relevant information.

What's WAIS About This Picture?

The image displays three screenshots of a web browser interface, likely NCSA Mosaic, illustrating the WAIS system's capabilities. The first screenshot on the left shows the 'welcome to WAIS Inc.' home page, which includes a logo and links for information about WAIS, access to WAISgate, and a directory of servers. The middle screenshot shows the 'WAISGATE (WEB <=> WAIS gateway) provided by WAIS Inc.' search interface, featuring a search box, a 'Submit Query' button, and a 'Fields for unstructured searching' section with input fields for body, subject, date, and from. The third screenshot on the right shows the search results for 'Gem corundum', displaying a description of the gemstone and a small image of a corundum crystal. Arrows point from the text labels to the corresponding screenshots.

WORLD WIDE WEB HOME PAGE

THE EXACT INFORMATION A SUBSCRIBER REQUESTED

FIELDS FOR UNSTRUCTURED SEARCHING

WAISserver Components

WAISserver 2.0 includes eight major functionality modules with each license:

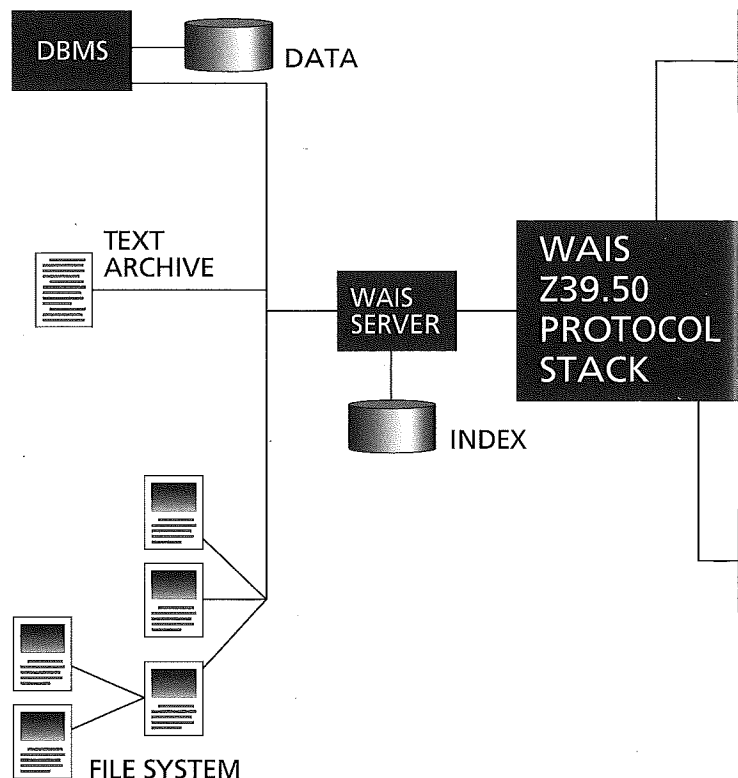
- **CUSTOM PARSER TOOLKIT** - a customizable API for getting content from documents in any type of format.
- **INDEXER** - for indexing local and remote content databases.
- **SEARCH AND RETRIEVAL SOFTWARE** - search functionality for local and remote databases, with relevance ranking and relevance feedback features.
- **THE WAIS INC. Z39.50 PROTOCOL STACK** - includes compatibility with versions one and two.
- **WAISgate** - a gateway that converts the HTTP protocol used by the World Wide Web to Z39.50 so that World Wide Web (WWW) servers and clients (such as NCSA Mosaic, Gopher, and Netscape) can initiate a WAIS search.
- **GOPHER GATEWAY** - a gateway that converts Gopher protocol to Z39.50 so that Gopher servers and clients can initiate a WAIS search.
- **FORWARDER** - allows clients and servers separated by firewalls to access one another.
- **MANAGEMENT REPORTING** - reports containing more than 20 statistics pertaining to users, usage patterns, connect time, searches performed, and more.

Where WAISserver Fits in the Internet

The WAISserver software architecture has four main components: the client, the server, the database, and the protocol, as shown below. The client is a user-interface program that sends search and retrieval requests to local or remote servers. Most popular clients are supported, such as NCSA Mosaic, Netscape™, and Gopher. The WAISserver product also includes a client.

The server is a program that services client requests. Servers are available for a variety of UNIX platforms. The server generally runs on a machine containing one or more information sources, or WAIS databases.

Where The W



When a client initiates a search request, the server searches an index rather than the databases where information is physically stored. WAISserver indexes databases automatically for a variety of different kinds of searches.

The WAIS protocol is used to connect WAIS clients and servers. It is based on the NISO Z39.50 Version 2 Information Retrieval Service and Protocol Standard. Z39.50 protocol allows the server to "speak" to databases that use other protocols, such as Web and Gopher databases via gateways.



WAIS Inc.

Applications of the WAISserver™

Communication and Organization

- E-mail Archive

Instant access to e-mail archives provides multiple benefits to your entire organization: Review past correspondence, improve meeting preparation, or quickly locate a customer's account history. WAISserver lets users search archives for specific text, by date, sender, subject line, or key words.

- In-House Phone Directories Online

Phone directories provide current information while eliminating the expense of printing and distributing hard copies. WAISserver enables phone books to be searched by name, title, department, location, and more.

- Net News Bulletin Board Archive

Take advantage of the wealth of relevant information posted to the Net News Bulletin Boards. WAISserver lets users search archived Net News by category, topic, sender, or date.

- Searching Calendars

Coordinate events and meetings by searching multiple calendars in multiple sites. WAISserver allows for indexing of names, dates, times, and other relevant information contained in online calendars.

Help Desk, Sales Support and Training

- Help Desk

Create an online help desk where customers can search technical problem resolution archives. WAISserver lets users search by symptom, computer platform, configuration, or by specific technical environment.

- Internal Sales and Technical Support

Improve access to technical documents and problem resolution information among the sales, technical, and executive staff. WAISserver enables searching by symptom, platform, configuration, technical environment.

- Training

Streamline the training process by placing training materials online. WAISserver helps employees quickly locate information on how to accomplish a particular task. Search for specific documents, procedures, photos, video clips, or product specifications.

Manufacturing and Maintenance

- **Manufacturing Design/Process Integrity**

Being able to search original design documentation at remote locations ensures compatibility of new designs, parts, components, and processes against original design and engineering specifications.

- **Repair and Maintenance**

Create online access to technical notes for field technicians. WAISserver lets the technician search for repair procedures by specific brand, model, part or other product specific information.

Marketing and PR

- **Press Releases**

Provide improved access for marketing and public relations to relevant online information. WAISserver lets users search an archive of press releases, announcements, executive briefings, or executive biographies.

- **Pre-sales Literature Requests**

Let your customers and leads fulfill their own requests for current product or service literature online. WAISserver lets customers search for information on the products and services that are of the most interest to them.

Human Resource and Recruiting

- **Locating Human Resources**

Quickly locate specialists for new ventures, consulting projects, or development of project teams. WAISserver helps managers find the most relevant documents within a database of resumes, proposals, contracts, and presentations.

- **Human Resource Job Openings**

Search available job openings to match the right person to the position. Positions can be indexed by job title, manager name, salary, location, and responsibilities.

- **Resumes**

Search large resume databases online by education, geographical location, interest area, titles, and salary history.

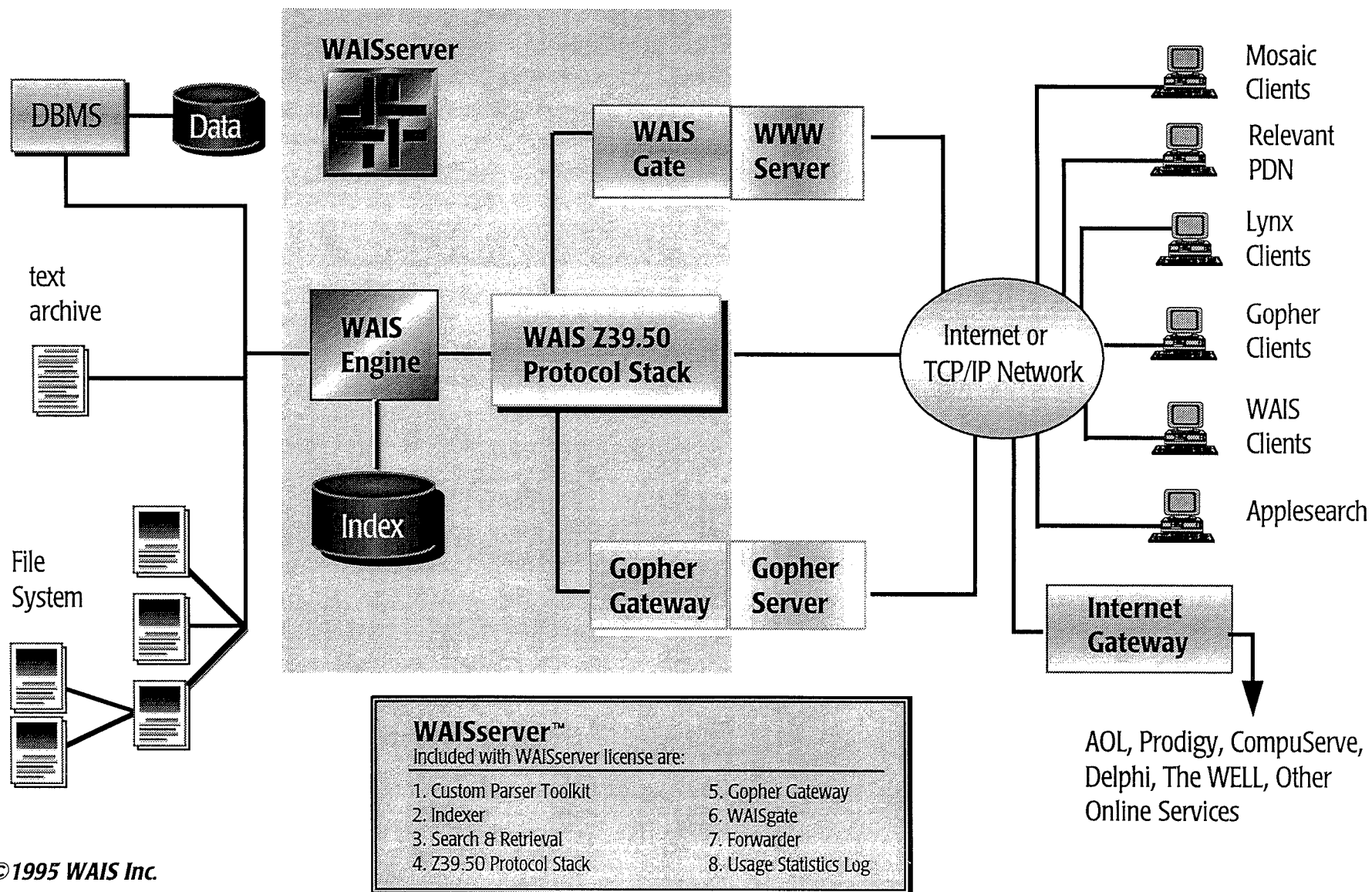
- **Tracking Consulting Services/Contract Employment**

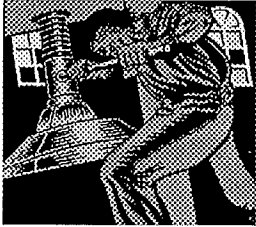
Track and list information about consultants and contract employees. WAISserver lets users search by task, specialty areas, results, or comments from other managers.

 **WAIS Inc**
Wide Area Information Servers



Where WAISserver Fits





Advantages of WAIS Inc. Servers Over Freeware 0.3 Servers

1. Improved natural language search -- enhanced by term and document scoring.
2. Improved relevance feedback -- RF algorithms are based on statistical analysis of search results.
3. Fielded searches -- searches can be limited to field within documents, such as author or date.
4. Custom Parser Toolkit, to customize the indexing of any type of document.
5. WAISgate, a module which allows World Wide Web servers to act as WAIS clients.
6. Weighted Boolean -- more consistent behavior than freeware Boolean.
7. Mixed natural language & Boolean -- natural language queries can include Boolean operators.
8. Capable of indexing large databases -- index is limited only by the maximum size of a single disk (currently, 2 gigabytes)
9. Logging capabilities -- sophisticated reporting on usage statistics per database.
10. Z39.50 -- Interoperability with other information providers.

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11. Multi-DB -- allows databases to span multiple disks and be quickly updated.
 12. Dates -- ability to handle date ranges in a search. WAIS Inc. is not yet announcing the details or the extent of the capabilities.
 13. DB integration -- allows documents to be stored in a traditional database and have WAIS retrieve them to send to the user. This feature will enable other enhancements to be implemented to the WAISserver as well.
 14. Grouping of search terms, allowing complex and unambiguous queries.
 15. Smaller index size -- one third the size of the freeware index.
 16. Identd -- Simple user authentication.
 17. Integrated with standard repositories.
 18. Documentation -- Robust technical documentation versus almost none for the freeware.
 19. Full technical support staff -- not available with freeware.
 20. Our customers have formed a WAIS users group for objective discussion and analysis of WAIS Inc.'s server.



FOR IMMEDIATE RELEASE

WAIS *Inc*

Wide Area Information Servers

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WAIS Inc. Announces WAISgate II: Makes Building Web-Based Search Systems Simple and Fast

SAN JOSE, Calif. April 10, 1995 -- Wide Area Information Servers (WAIS), Inc. based in San Francisco, Calif. today announced WAISgate II, an improved gateway between a World Wide Web server and WAIS databases located on the same machine or anywhere on a wide area network.

WAIS is offering WAISgate II as a component of the WAISserver 2.0 publishing platform. "Integrating full-text search across multiple databases, in multiple locations, and from multiple vendors has been a driving part of the WAIS vision", said Bruce Gilliat, Vice President of Sales and Marketing at WAIS Inc. "With WAISgate II, anyone familiar with HTML can design search systems that automatically integrate material from these search servers into the World Wide Web.

WAISgate II works in conjunction with WWW servers and can access any WAIS database, whether from WAIS Inc., Fulcrum or the many versions of WAIS-compatible servers distributed as freeware over the Internet.

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With WAISgate II accessing WAIS services is as easy as writing HTML. Web designers can specify WAIS databases they wish to search and assign search criteria, such as field attributes, to the search. WAISgate II creates the appropriate query, initiating a WAIS search and returning the results for display within an HTML template automatically. A major benefit is that managers of WWW sites will not be required to write custom PERL to integrate searching with their WWW server.

By working from within HTML, forms designers have the greatest flexibility in creating custom database front ends. In addition, WAISgate II allows the designer to create custom HTML templates for the display of search results and documents from the database.

WAISgate II is fast -- local WAIS databases are searched directly from WAISgate II, improving the speed at which users receive the results of their search. WAISgate II allows searching of local and remote databases. WAISgate II can automatically activate WAIS' Z39.50 protocol to search multiple, geographically dispersed, databases in a single search when required.

"WAISgate II makes it simple to integrate full text search into any web site", said Brewster Kahle, President of WAIS Inc. "Our experience building online services for commercial customers such as CMP Publications has made it possible for us to seamlessly integrate text search into the World Wide Web."

For an online demo of WAISgate II, contact <http://www.wais.com/waisgate.html>. All qualifying WAISserver customers will be upgraded to WAISgate II at no charge. WAISserver pricing begins at \$15,000. Additional pricing and configuration information is available from WAIS Inc.

Founded in 1992 by Internet pioneer Brewster Kahle, WAIS Inc. is headquartered in San Francisco, California, and is a privately held

(MORE)

company. WAIS Inc. provides products and services for organizations who wish to deliver information over Internet.

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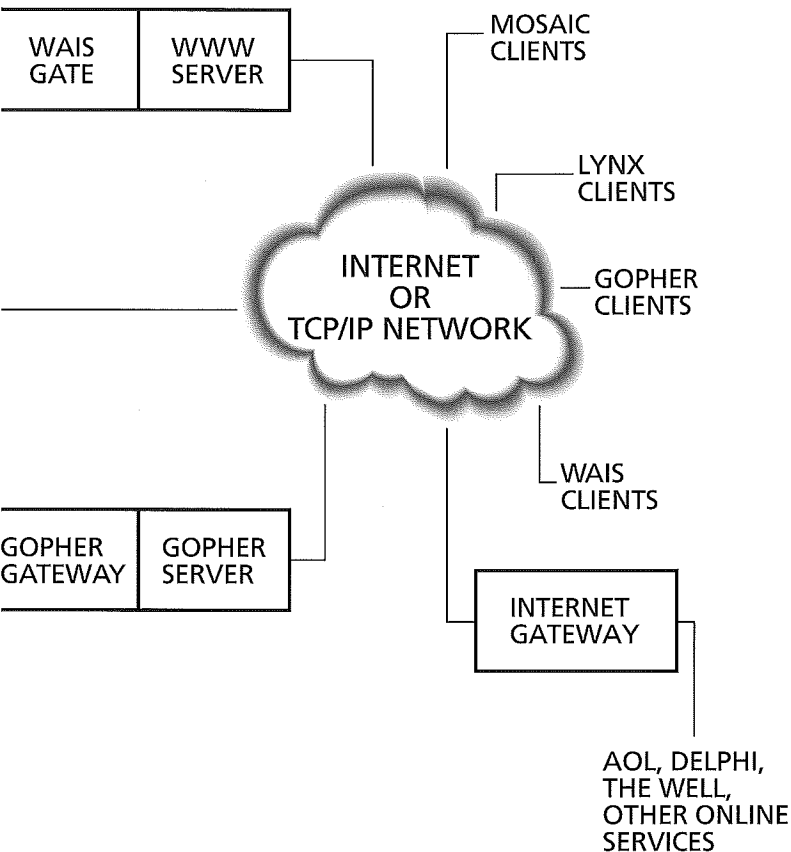
WAIS Production Services create turnkey, Internet-based services using WAISserver(tm) as the core technology. WAISserver automatically creates HTML documents on the fly as it indexes content databases. In addition to implementing WAISserver technology, WAIS Production Services can integrate custom modules for:

- User registration and feedback
- Transaction-based and subscription-based billing
- Personalized invoicing for online shopping
- Archived searching for back issues
- Automatic content expiration
- New content alerting

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WAISserver Fits



WAISserver Features

PRODUCTION ON-LINE PUBLISHING FEATURES

- **Large Databases**
Index is limited only by the maximum size of available disk space.
- **Logging Capabilities**
Sophisticated reporting on usage statistics per database.
- **Custom Parser Toolkit**
Customize the indexing of any type of document.
- **Small Index Size**
One third the size of the data.

ACTIVE SERVICE FEATURES

- **Incremental Indexing**
Add new information to the database without re-indexing the entire database, for Internet publishers who have data that feeds in frequently.

- **Date Range Searching**
Search for date ranges for precise control over timely information.
- **Delete Document**
Delete documents from a WAISserver database without re-indexing, for active Internet services.

LARGE DATABASE FEATURES

- **Multiple Databases**
Databases can span multiple disks.
- **Database Integration**
Access documents stored in traditional RDMS databases such as Oracle without re-indexing or re-architecting your system, allowing you to publish on the Internet with a minimum of engineering intervention.

CONNECTIVITY FEATURES

- **z39.50 Version 2 Support**
WAISserver supports the latest version of the z39.50 protocol, enabling your WAISserver to "speak" the standard search client languages.
- **WAISsearch Client (waislookup)**
New command line client for system administrators.
- **WAISgate**
Allows World Wide Web clients to access WAIS databases.

SEARCH FEATURES

- **Literal Search**
Limits search results to entries that match search parameters exactly.
- **Boolean Search**
And/or criteria.
- **Relevance Weighting**
WAISserver ranks documents in order of relevance to the query. Relevance weighting takes into account advanced indexing information such as key word proximity, density (number of times the keywords appear, and where), and locations of the keywords in the documents.
- **Relevance Feedback**
Can refine a search by indicating a document that closely matches the desired search results, such as "get me more documents like this one."
- **Query Report**
Lists terms searched, how the server interpreted the request, how many words and documents are being searched, and how many times each word appeared, and more.

WAISserver Benefits

BENEFITS TO INTERNET PUBLISHERS

WAISserver allows the Internet publisher to:

- Publish information to the Web without costly HTML coding
- Access local and remote databases
- Access large databases
- Automatically index databases
- Index multiple databases, and in effect "combine" them
- Mix proprietary databases to leverage existing MIS architecture
- Add new content without re-indexing the entire database
- Create HTML documents "on the fly"
- Publish documents in any native format through the use of an API
- Support a variety of popular clients
- Minimize start up and maintenance costs for an Internet-based service
- Track usage and status

BENEFITS TO INTERNET USERS

The WAISserver allows Internet users to:

- Search Internet databases by simply typing questions
- Perform literal searches, Boolean searches, and natural language searches
- Get the most relevant documents, listed in order of relevance
- Get query report on search requests, such as number of times a word appeared, and where
- Receive documents that satisfy search requests with their criteria highlighted in bold

We've Moved!

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 **WAIS Inc**
Wide Area Information Servers

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